

WHAT IS CLAIMED IS

1. A wireless data communication device particularly for a portable object, the device including an oscillator circuit, which produces high frequency signals, and a signal processing unit connected to the oscillator circuit, wherein a connection structure of one part of the oscillator circuit, which produces the high frequency  
5 signals, is arranged to act as antenna for the transmission of data by means of stray signals transmitted by the connection structure, and wherein the processing unit provides at least one control signal to the oscillator circuit, said control signal depending upon the data to be transmitted by means of the stray signals.

2. A communication device according to claim 1, wherein the processing  
10 unit provides a control signal to the part of the oscillator circuit that produces high frequency signals, so as to control the switching on or off of at least one electronic element of said part of the oscillator circuit in order to carry out amplitude modulation of the stray signals, said modulation depending upon the data to be transmitted by the connection structure.

3. A communication device according to claim 1, wherein the processing  
15 unit provides a control signal to the oscillator circuit in order to carry out a frequency modulation of the stray signals, whose frequency is based on the frequency of the high frequency signals, said modulation depending upon the data to be transmitted by the connection structure.

4. A communication device according to claim 1, wherein it includes  
20 radiofrequency signal receiving means, and radiofrequency signal frequency conversion means, wherein the oscillator circuit generates high frequency signals for the frequency conversion, the processing unit receiving frequency converted intermediate signals from the frequency conversion means in order to extract the  
25 received data.

5. A communication device according to claim 1, wherein the oscillator  
circuit includes a frequency synthesiser connected to a reference oscillator unit, said synthesiser including, in a phase lock loop, a voltage controlled oscillator, followed by an amplifier, which provides high frequency signals, a frequency divider for signals  
30 provided by the voltage controlled oscillator, and a phase detector comparing the frequency of the signals provided by the frequency divider and the frequency of the reference signals provided by the reference oscillator unit, the output of the phase detector being connected to the voltage controlled oscillator, and wherein the control signal, provided by the processing unit, controls the switching on or off of the amplifier  
35 for the transmission of data by amplitude modulation of the stray signals.

6. A communication device according to claim 1, wherein the oscillator circuit includes a frequency synthesiser connected to a reference oscillator unit, said synthesiser including, in a phase lock loop, a voltage controlled oscillator, followed by an amplifier, which provides high frequency signals, a frequency divider for the signals  
5 provided by the voltage controlled oscillator, and a phase detector comparing the frequency of the signals provided by the frequency divider and the frequency of the reference signals provided by the reference oscillator unit, the output of the phase detector being connected to the voltage controlled oscillator, and wherein the processing unit provides the control signal to the frequency divider so as to modify  
10 the division factor of the divider for the transmission of data by frequency modulation of the stray signals.

7. A short distance wireless data communication system between a communication device according to claim 1 and an electronic apparatus, wherein the apparatus includes stray signal receiving means and signal processing means  
15 connected to the receiving means in order to extract the data from the stray signals transmitted by the device when the device is placed in proximity to the apparatus.

8. A communication system according to claim 7, wherein the communication device forms part of a portable object, such as a watch, wherein electronic apparatus includes a housing for receiving the portable object so that the  
20 apparatus constitutes a support for the portable object.

9. A communication system according to claim 8, wherein the support apparatus and the portable object include inductive type charging means for a battery or an accumulator of the portable object, the charging means including a transformer, whose first coil forming the primary winding of the transformer, is arranged in the  
25 apparatus, and whose second coil forming the secondary winding of the transformer, is arranged in the portable object.

10. A communication system according to claim 9, wherein the device is arranged for transmitting data to the apparatus, by means of stray signals, relating to the end of the portable object's battery or accumulator charging operation.

30 11. A communication system according to claim 7, wherein the electronic apparatus includes radiofrequency transmitting means for transmitting data to the device, which includes radiofrequency signal receiving means, and wherein the processing unit of the device provides a control signal to the oscillator circuit of the device for the transmission, by means of stray signals, of a confirmation of the data  
35 received in the radiofrequency signals.